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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SAJOUS, WESNER	
ART UNIT	**PAPER NUMBER**
2676	21

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/641,930	Applicant(s) VALMIKI ET AL.	
	Examiner Wesner Sajous	Art Unit 2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6,8,10-15,18,20 and 22-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4,6,10-15,18,20 and 22-30* is/are allowed.

6)☒ Claim(s) *1,2,31,34 and 35* is/are rejected.

7)☒ Claim(s) *32,33 and 36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *20* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Remark

This communication is responsive to the amendment and response filed on 4/12/2004. Claims 1, 2, 4, 6, 8, 10-15, 18, 20, and 22-36 are presented for examination.

Allowable Subject Matter

1. The indicated allowability of claims 3-15 is withdrawn in view of the newly discovered reference(s) to Oh (US Pat. 6459456). Rejections based on the newly cited reference(s) follow. The Examiner apologizes for the inconvenience that may cause your party.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 27-30 are objected to because of the following informalities: In claim 27, the Applicant to clearly define the claimed invention, is required to insert, after "boundary" the phrase "in an external memory". Appropriate correction is required.

Claims 28-30 are objected to for the same reason as claim 27, by dependence.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al., US Pat. No. 5923385, hereinafter Mills, in view of Sita et al. (US Pat. No. 6301299).

Considering claim 1, Mills, at fig. 1, discloses a video transport processor comprising:

an input (20) for receiving one or more compressed data streams (*i.e., MPEG-2 transport streams including compressed audio, video, and other data or elementary stream data, see col. 8, lines 48-56*); and means for extracting MPEG video data from the compressed data streams (*is met by items 50 and 52 of fig. 1, see col. 9, lines 29-40, and col. 10; lines 24-25*).

It is noted that Mills fails to disclose the means for storing MPEG video data in an external memory and means generating a table of MPEG start codes table to index and access the MPEG video data stored in the external memory during decoding of the MPEG video data.

Nonetheless, Sita, in a similar art, teaches the means for storing MPEG video data in an external memory (212, see fig. 2A or 3A), and means (308) for generating a table of MPEG start codes table to index and access the MPEG video data stored in the

external memory during decoding of the MPEG video data (via, e.g., video decoder ASIC of fig. 2A). See col. 7, lines 12-18.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Mills' system to include the MPEG start codes table index in the same conventional manner as taught by Sita; in order to process header information for the sequence, group of pictures and picture records in the bit-stream. See Sita's col. 7, lines 16-18.

Regarding claim 2, Mills, at fig. 1, discloses a video transport processor comprising:

an input (20) for receiving one or more compressed data streams (*i.e., MPEG-2 transport streams including compressed audio, video, and other data or elementary stream data, see col. 8, lines 48-56*); and means for extracting MPEG video data from the compressed data streams (*is met by items 50 and 52 of fig. 1, see col. 9, lines 29-40, and col. 10, lines 24-25*).

It is noted that Mills fails to disclose means generating a table of MPEG start codes table to index video data stored in the external memory, wherein the video data includes MPEG-2 video data comprising a plurality of slices, and the video transport processor further comprises means for aligning a start of the plurality of slices to a boundary in the external memory when storing the MPEG-2 video data in the external memory.

Nonetheless, Sita, in a similar art, teaches the means (308, fig. 3) for generating a table of MPEG start codes table to index video data stored in the external memory

(212, fig. 2A, see col. 7, lines 12-18), wherein the video data includes MPEG-2 video data comprising a plurality of slices (see col. 2, lines 17-24), and the video transport processor (of fig. 3A) further comprises means (214 and 218 of fig. 3A) for aligning a start of the plurality of slices to a boundary in the external memory (212) when storing the MPEG-2 video data in the external memory (as depicted in fig. 13A). Note that a SLICE is composed of a plurality of macroblocks (see col. 2, lines 22-23). This being the case, each of macroblocks channels A, B and channel C stored in external memory (e.g., RDRAM, see fig. 13A) are each characterized as a SLICE that is aligned to the boundary of RDRAM.

Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Mills' system to include the MPEG start codes table index in the same conventional manner as taught by Sita; in order to process header information for the sequence, group of pictures and picture records in the bit-stream. See Sita's col. 7, lines 16-18.

5. Claims 31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siracusa et al., US Pat. No. 5371547 in view of Sita et al. (US Pat. No. 6301299).

Considering claim 31, Siracusa discloses a video transport processor comprises an input (12, fig. 6) for receiving an MPEG transport stream including MPEG video data comprising SLICEs (see abstract, and col. 4, lines 7-65, and col. 5, lines 8-10); a transport processor (20, fig. 6) for processing headers in the MPEG stream (col. 6, lines 18-26).

It is noted that although Siracusa discloses the use of a start code alignment module (as depicted in figs. 2-5) for aligning a start of the plurality of Slices to a suitable boundary when storing MPEG video data and for generating a start code table to index MEPG video data that is stored (see col. 7, lines 9-42, and col. 8, line 62 to col. 10, line 25); Siracusa fails to teach that the start code alignment module is for storing MEPG video data in an external memory.

Nonetheless, Sita, in a similar art, teaches the functional equivalence for a start code alignment module (e.g., items 214 and 218 of fig. 2A) is for storing MEPG video data in an external memory (212). See col. 7, lines 12-18).

Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Siracusa to include the MPEG start codes table in the same conventional manner as taught by Sita; in order to process header information for the sequence, group of pictures and picture records in the bit-stream. See Sita's col. 7, lines 16-18.

As per claim 35, Siracusa fails to teach a memory control interface that includes a buffer for storing at least a portion of the MPEG video data prior to providing it to the external memory.

Sita discloses the functional equivalence for a memory control interface (214) that includes a buffer (224 of item 320 of fig. 2B) for storing at least a portion of the MPEG video data (e.g., bit stream data via item 218 of fig. 2A) prior to providing it to the external memory (212). See abstract and col. 7, lines 6-20, and lines 62-64 in light of col. 10, lines 57-63.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Siracusa to include the MPEG start codes table in the same conventional manner as taught by Sita; in order to temporarily stored video data before it is provided for display at output 200 of fig. 2A.

As per claim 34, Sita discloses a video transport processor (e.g., the video decoder ASIC of fig. 2A) that comprises a memory interface (214 of fig. 2A or fig. 3A) for interfacing between the start code alignment module (218/308 of fig. 3A) and the external memory (212). See col. 7, lines 7-20.

Allowable Subject Matter

6. Claims 32-33, and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims, because the prior art of record fail to teach a video transport processor that comprises a switch for providing MPEG transport stream to a transport processor or the start code alignment module (as in Re claim 32), wherein one or more zeros are added to at least one of the SLICEs to align another one of the SLICEs to the suitable boundary in the external memory (as in re claim 36).

14. Claims 4, 6, 10-15, 18, 20 and 22-30 are allowed over the prior art.

Reasons For Allowance

The following is an Examiner's Statement of Reasons for Allowance:

The present application has been thoroughly reviewed. Upon searching a variety of databases, the Examiner respectfully submits that the prior art of record (PTO-892) does not teach or suggest a transport processor system comprising, inter-alia, — a video transport processor that comprises for aligning a start of a plurality of SLICEs of MPEG-2 video data to a suitable boundary in an external memory when storing the MPEG-2 video data in the external memory (as recited in claim 2); and a system comprising a satellite transport processor for receiving at least one of the compressed data streams received from the core transport processor and for extracting video data

including a plurality of SLICEs; and MPEG-2 video decoder for blending the decoded video data with graphics, wherein the satellite transport processor generates a start code table to index the video data and aligns the plurality of SLICEs to a suitable boundary in an external memory— (as recited in independent claim 27). See paper # 18 for other reasons of allowability reflecting claims 4-26.

Conclusion

Any response to this action should be mailed to:

Box
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Washington, DC 20231

or faxed to:

(703) 872-9314, (for technology center 26000 only)

Or:

(703) 308-5359 for informal or draft communications, please label "PROPOSED" or DRAFT")

Hand-held delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, 6th floor (receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesner Sajous whose telephone number is (703) 308-5857. The examiner can be reached on Mondays thru Thursdays and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Supervisor, Matthew Bella, can be reached at (703) 308-6829. The fax phone number for this group is (703) 308-6606.

Wesner Sajous -WS-
7/10/2004

Kee M. Tung
Primary Examiner